

Notice of Allowability

Application No.

10/760,410

Examiner

Tom V. Sheng

Applicant(s)

SHIH ET AL.

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 3/27/2007.
2. ☒ The allowed claim(s) is/are 1-8.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

Allowable Subject Matter

1. Claims 1-8 are allowed.
2. The following is an examiner's statement of reasons for allowance:

The invention is directed to a scan driver of an active matrix flat panel display. The scan driver utilizes low input voltages to be level shifted to driving levels. The scan driver includes a latch unit, a level shift circuit and a buffer. The level shift circuit receives a first control signal, a second control signal, a first clock and a second clock, so as to output a scan signal with high voltage level.

Independent claims 1, 4 and 6 identify the uniquely distinct features,

"a first switch unit, to receive a first clock signal and a second clock signal, and to perform switching using the first control signal;

a second switch unit, coupled between the first switch unit at both a first connection node and a second connection node and an operating voltage, to receive the first clock signal and the second clock signal through switching the first switch unit, thereby raising voltages at the first connection node and the second connection node to the operating voltage;

a third switch unit, coupled between the first and second connection nodes and the operation voltage, to receive the first control signal and the second control signal (through the latch unit), and to receive the first clock signal or the second clock signal through the first switch unit (on and off), thereby providing a stable processing;

a fourth switch unit, coupled between the first and second connection nodes and

Art Unit: 2629

the operating voltage, to perform switching of the fourth switch unit according to voltage levels of the first connection node and the second connection node; and

a fifth switch unit, connected to the fourth switch unit, to generate a scan signal to output (terminal) according to the switching of the fourth switch unit.”

Kim et al. (US 7,050,036 B2), hereinafter Kim, teaches a scan driver for a liquid crystal display. The scan driver comprises a shift stage array consisting of a plurality of stages and a level shifter array consisting of level shifters each connected between a shift register and a gate line. The stages of the shift stage array shift a start pulse to sequentially supply the shifted pulse to the level shifters. The stages of the level shifter array each receives a clock out of four clocks in order as to level-shift and drive a corresponding gate line. Each stage of the level shifter has three units and do not correspond in any way to the five switch units of the level shift circuit (for each stage) as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom V. Sheng whose telephone number is (571) 272-7684. The examiner can normally be reached on 9:00am - 6:00pm.

Art Unit: 2629

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tom Sheng

AMR A. AWAD
SUPERVISORY PATENT EXAMINER

A handwritten signature in black ink, appearing to read 'Amr A. Awad', with a long, sweeping horizontal line extending to the right.